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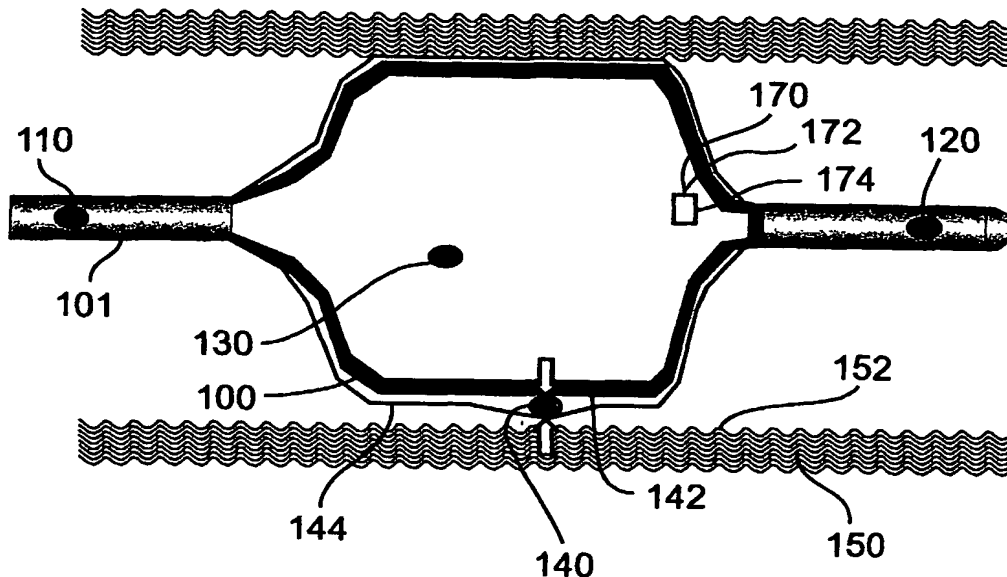
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(54) Title: DEVICE, SYSTEM, AND METHOD FOR DETECTING, LOCALIZING, AND CHARACTERIZING PLAQUE-INDUCED STENOSIS OF A BLOOD VESSEL



(57) Abstract: The present invention is of system, device, and method for detection, localization, and characterization of plaque-induced stenosis of a blood vessel. More particularly, the present invention relates to a balloon catheter (101) having an expandable balloon (100) insertable into a blood vessel, which balloon comprises a plurality of pressure sensors (110, 120, 130, 140) operable to detect stenosis of the vessel, and further operable to report degrees of compressibility of stenotic regions of plaque within the vessel, thereby distinguishing between standard and vulnerable plaque.



— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

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A. CLASSIFICATION OF SUBJECT MATTER

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US CL : 600/486, 485, 585

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 600/486, 485, 585, 481, 488, 561, 585, 424, 431, 437; 604/96.01, 97.01, 98.01, 104

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
EAST

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,178,153 A (EINZIG) 12 January 1993 (12.01.1993), column 18, line 55 to column 24, line 13.	1, 2, 4-6
Y		3, 7-12
Y	US 3,831,588 A (RINDNER) 27 August 1974 (27.08.1974), column 2, lines 16-20.	3
Y	US 4,211,233 A (LIN) 08 July 1980 (08.07.1980), column 3, lines 47-50.	7
Y	US 5,259,837 A (VAN WORMER) 09 November 1993 (09.11.1993), column 3, line 53 to column 4, line 19.	8-12
A	US 5,865,801 A (HOUSER) 02 February 1999 (02.02.1999), column 5, line 54 to column 6, line 40.	13

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

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